

Appl. No. 10/708,061  
Amdt. dated April 29, 2005  
Reply to Office action of February 07, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 5 Claim 1 (Currently Amended): A projecting system for projecting an image onto a screen comprising:
- a projector comprising:
    - a light source;
    - a beam splitter installed on a side of the light source, for splitting a beam  
10 generated by the light source into a visible beam and an invisible beam;
    - a first image-forming device for modulating the invisible beam to form a first image;
    - a second image-forming device for modulating the visible beam to form a  
15 second image having at least one cursor; and
    - a prism for projecting the first image and the second image onto the screen; and
  - ~~an~~ a movable image-capturing device for capturing a part of the first image, the image-capturing device having
    - 20 an output unit for outputting the first image captured by the image-capturing device, wherein the output unit outputs a first part of the first image at a first time, outputs a second part of the first image at a second time; and
    - 25 a data processor for receiving data from the output unit and changing the position of the cursor according to the first part and the second part of the first image.

Claim 2 (Original): The projecting system of claim 1 wherein the first image is a square

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matrix.

Claim 3 (Original): The projecting system of claim 1 wherein the data processor is connected to the projector through a transmission line.

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Claim 4 (Original): The projecting system of claim 1 wherein the data processor is connected to the projector wirelessly.

10 Claim 5 (Original): The projecting system of claim 1 wherein the data processor calculates a moving distance for the cursor according to a difference between the first part and the second part of the first image.

15 Claim 6 (Original): The projecting system of claim 5 wherein the projecting system further comprises a computer, and the data processor is installed inside the computer for calculating the moving distance of the cursor.

20 Claim 7 (Original): The projecting system of claim 6 wherein the output unit of the image-capturing device transmits the first part and the second part of the first image to the data processor through a transmission line.

Claim 8 (Original): The projecting system of claim 6 wherein the output unit of the image-capturing device transmits the first part and the second part of the first image to the data processor wirelessly.

25 Claim 9 (Original): The projecting system of claim 1 wherein the image-capturing device further comprises a processing unit for calculating a difference between the first part and the second part of the first image so as to calculate a moving distance for the cursor.

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Claim 10 (Original): The projecting system of claim 9 wherein the projecting system is cooperated with a computer, and the image-capturing device further comprises a data transmitter for transmitting the moving distance of the cursor.

- 5 Claim 11 (Original): The projecting system of claim 1 wherein the first image-forming device and the second image-forming device are liquid crystal displays (LCD).

Claim 12 (Original): The projecting system of claim 1 wherein the first image-forming device and the second image-forming device are digital micromirror devices (DMD).  
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Claim 13 (Currently Amended): The projecting system of claim 1 wherein the image-capturing photosensing device is a charge coupled device (CCD).  
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Claim 14 (New): A method for controlling position of a cursor projected onto a screen in a projection system, the projection system comprising:  
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a projector comprising:

a light source;

20 a beam splitter installed on a side of the light source, for splitting a beam generated by the light source into a visible beam and an invisible beam;

a first image-forming device for modulating the invisible beam to form a first image;

25 a second image-forming device for modulating the visible beam to form a second image comprising the cursor; and

a prism for projecting the first image and the second image onto the screen; and

a movable image-capturing device for capturing a part of the first image;

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the method comprising:

- the image-capturing device capturing a first part of the first image;  
moving the image-capturing device;  
the image-capturing device capturing a second part of the first image; and  
5 changing the position of the cursor according to differences between the first  
part and the second part of the first image.

Claim 15 (New): The method of claim 14 further comprising the image-capturing device  
transmitting the first and parts of the first image to a data processor, the data  
10 processor calculating a new position of the cursor according to differences between  
the first part and the second part of the first image.

Claim 16 (New): The method of claim 15 further comprising the image-capturing device  
wirelessly transmitting the first part and the second part of the first image to the data  
15 processor.

Claim 17 (New): The method of claim 15 further comprising the data processor  
transmitting the new position of the cursor to the projector

20 Claim 18 (New): The method of claim 15 further comprising the data processor wirelessly  
transmitting the new position of the cursor to the projector